

Application No.: 10/521,173
Amendment under 37 CFR 1.111
Reply to Office Action dated April 8, 2008
July 8, 2008

AMENDMENTS TO THE CLAIMS

Please substitute the following claims for the pending claims with the same numbers respectively:

Claim 1 (Currently amended): An aerosol particle charging device comprising:

a chamber;

an inlet duct which flows gas including aerosol particles to be processed into said chamber;

a outlet duct which exhausts the processed aerosols from said chamber; and

an X-ray emitting section which is arranged in the vicinity of said inlet duct facing said chamber and emits an X-ray having a main wavelength within a range of 0.13 nm to 2 nm.

Claim 2 (Currently amended): [[An]] The aerosol particle charging device according to claim 1, wherein said X-ray emitting section includes a ~~power~~ powered switch ~~which controls to control~~ the amount of or to stop the emission and stop of the X-ray.

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Claim 3 (Currently amended): An aerosol particle charging device comprising:

a chamber;

an electric field generation section which includes electrode plates arranged on both surfaces facing each other of said chamber and generates an electric field from an irradiating section to a non-irradiating section of an X-ray within said chamber;

an X-ray emitting section which is arranged facing ~~one~~ region of said chamber and emits an X-ray to said irradiating section of said chamber having a main wavelength within a range of 0.13 nm to 2 nm;

~~an electric field generation section which includes electrode plates arranged on both surfaces facing each other of said chamber and generates an electric field from an irradiating section to a non-irradiating section of the X-ray within said chamber;~~

an inlet duct which is arranged in the X-ray non-irradiating section of said chamber and flows gas including aerosol particles to be processed into said chamber; and

a outlet duct which is arranged at a position facing said inlet duct of the X-ray non-irradiating section of said chamber and exhausts the processed aerosols from said chamber.

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Claim 4 (Currently amended): [[An]] The aerosol particle charging device according to claim 3, wherein said X-ray emitting section includes a ~~power~~ powered switch ~~which controls~~ to control the amount of or to stop the emission and stop of the X-ray.

Please add the following new claims 5-10 as follows:

Claim 5 (New): The aerosol particle charging device according to claim 1, further comprising a rectifying plate which is arranged in the vicinity of said outlet duct in said chamber, having a plurality of openings for rectifying air flow in said chamber.

Claim 6 (New): The aerosol particle charging device according to claim 4, wherein said inlet and outlet duct face each other.

Claim 7 (New): The aerosol particle charging device according to claim 4, wherein said electric field generation section comprises a direct current high voltage power source.

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Claim 8 (New): An aerosol particle charging device comprising:

- a chamber;
- an inlet duct which flows gas including aerosol particles to be processed into said chamber;
- a outlet duct which exhausts the processed aerosols from said chamber; and
- an X-ray emitting section which is arranged closer to said inlet duct than said outlet duct, said X-ray emitting section facing said chamber and emits an X-ray having a main wavelength within a range of 0.13 nm to 2 nm.

Claim 9 (New): The aerosol particle charging device according to claim 8, wherein said X-ray emitting section includes a powered switch to control the amount of or to stop the emission of the X-ray.

Claim 10 (New): The aerosol particle charging device according to claim 8, further comprising a rectifying plate which is arranged in the vicinity of said outlet duct in said chamber, having a plurality of openings for rectifying air flow in said chamber.